

## REMARKS

Claims 12-19 are currently pending in this Application. Claims 12-19 are amended with this Response. The Examiner's objections and rejections will now be respectfully addressed in turn.

### Rejections under 35 U.S.C. §101

The Examiner has rejected Applicant's claims 12-16 for allegedly being directed to non-statutory subject matter under 35 U.S.C. §101. Applicant respectfully traverses this rejection.

First, in response to the Examiner's non-congressional citation of May 15, 2008, Applicant respectfully refers the Examiner to the below quoted portion of MPEP 2106, which explains the Congressional intent behind 35 U.S.C. §101, stating,

“The plain and unambiguous meaning of section 101 is that any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may be patented... The use of the expansive term "any" in section 101 represents Congress's intent not to place any restrictions on the subject matter for which a patent may be obtained beyond those specifically recited in section 101 and the other parts of Title 35.... Thus, it is improper to read into section 101 limitations as to the subject matter that may be patented where the legislative history does not indicate that Congress clearly intended such limitations.”

Accordingly, as the May 15, 2008 memorandum cited by the Examiner in the Office Action is clearly not part of the “legislative history” discussed above, use of this memorandum in an attempt to read subject matter limitations into 101 is improper. As such, this memorandum is insufficient as an explanation provided in an attempt to determine that Applicant's claimed subject matter falls outside the statutory process, machine, manufacture, or composition of matter categories.

In addition, MPEP 2106 in part states that,

“The subject matter courts have found to be outside of, or exceptions to, the four statutory categories of invention is limited to abstract ideas, laws of nature and natural phenomena...

...For claims including such excluded subject matter to be eligible for patent protection, the claim must be for a practical application of the abstract idea, law of nature, or natural phenomenon. *Diehr*, 450 U.S. at 187, 209 USPQ at 8...

...A claimed invention is directed to a practical application of a 35 U.S.C. 101 judicial exception when it:

- (A) "transforms" an article or physical object to a different state or thing; or
- (B) otherwise produces a useful, concrete and tangible result, based on the factors discussed below.”

Though Applicant’s claims in no way fall into any of these excepted categories, the Examiner clearly attempts to demonstrate that Applicant’s claims do qualify for the “practical application judicial exception” provided for the excepted categories by stating in the Office Action that a statutory process *in general* must be tied to another statutory category (i.e. produce the tangible result discussed in (B) above) or transform underlying subject matter to a different state or thing.

In Response to this finding by the Examiner, Applicant first notes that such requirements (as cited as (1) and (2) in the Office Action) do not apply to claimed processes *in general*, but instead apply to subject matter (such as a process) that falls first within the exceptions to the statutory categories, those exceptions being abstract ideas, laws of nature and natural phenomena. As Applicant’s claimed method does not fall within any of these exceptions (and the Examiner makes no attempt to demonstrate this to be the case), and the cited requirements (1) and (2) (based again on an improper

memorandum) to not apply to processes in general, Applicant respectfully asserts that these requirements are improperly applied to Applicant's claims.

Lastly, Applicant respectfully notes that Applicant's claims clearly recite a tangible result in their direction to adaptability of a vector.

For at least the above reasons, Applicant respectfully submits that the 101 rejection is improper and overcome.

#### Rejections under 35 U.S.C. §112

Claim 12-19 are rejected under 35 U.S.C. §112 second paragraph for allegedly being indefinite. In Response, Applicant respectfully amends claims 12-19.

#### Rejections under 35 U.S.C. §102(b)

Claims 12-19 have been rejected under 35 U.S.C. §102(b) as being anticipated by United States Patent No. 5,734,384 to Yanof ("Yanof" hereinafter). Applicant respectfully traverses this rejection.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference."  
*Verdegaal Bros. V. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Applicant's claims 12 and 17 respectively recite *inter alia*,

"wherein the vector is a direction vector which has a specifiable orientation and a specifiable length spanning the predeterminable region, the vector being adapted to the multidimensional data set, wherein the vector is fixed on a first two-dimensional plane of section (S1) by specifying the orientation and length," and

"wherein the vector is fixable by means of manipulation means on a first two-

dimensional plane of section (S1) by specifying the orientation and length and the vector so fixed.”

Yanof does not teach a vector that can be manipulated in both direction/orientation and length. On the contrary, Yanof merely teaches a coordinate system with three vertical axes capable of rotation. Vector length is not taught or discussed in Yanof.

In addition, Yanof discloses generation of a 3D coordinate system, as opposed to the three-dimensional image data set recited in Applicant’s claims, which is generated via reconstruction and assembly of two-dimensional image data. A length manipulatable vector (determined in two-dimensional cutting planes not taught in Yanof) such as that recited in Applicant’s claims is important because defined vector length defines a cut along a vector plane defined by the vector, and defines volume within the three-dimensional set (please see the exemplary embodiment at the paragraph spanning pages 7 and 8 of the original Application). In this embodiment, regions of the multi-dimensional data set are cut off such that either only data between two vector planes or data on one side or the other is displayed. Such a data display is not possible in Yanof because an image area cannot be selected and cut off with the coordinate system of Yanof (as the Yanof system is designed/taught). Thus, since Yanof would clearly require substantial re-design in order to allow for the above, any *pro arguendo* modification to Yanof under a potential 103 rejection would be improper under MPEP 2143.01 VI.

Accordingly, an exemplary embodiment protected by Applicant’s invention would simplify, and render more efficient, an obtaining of at least some of the results determined using Yanof. This is done via determination and display of a vector, as recited in claim 12, on a first and second two-dimensional plane, wherein the vector may be amended with regard to both orientation and length. This is significantly different from the Yanof system (with applicable advantages provided thereover), which only describes an adjustable 3-D coordinate system.

For at least the above reasons, Applicant respectfully asserts that Yanof fails to disclose all of the limitations of claim 12 and 17 and claims 13-15 and 18-19 that depend variously therefrom. Accordingly, Yanof does not anticipate claims 12-19. Applicant respectfully submits that claims 12-19 are not further rejected or objected and are therefore allowable. Reconsideration and allowance of claims 12-19 is respectfully requested.

Conclusion

Applicant believes that all of the outstanding objections and rejections have been addressed herein and are now overcome. Entry and consideration hereof and issuance of a Notice of Allowance are respectfully requested.

Applicant hereby petitions for any extension of time under 37 C.F.R. 1.136(a) or 1.136(b) that may be necessary for entry and consideration of the present Reply.

If there are any charges with respect to this Amendment or otherwise, please charge them to Deposit Account No. 06-1130 maintained by Applicants' attorneys.

The Office is invited to contact applicant's attorneys at the below-listed telephone number concerning this Amendment or otherwise regarding the present application.

Respectfully submitted,

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